

## REMARKS

After entry of this amendment, claims 33-51 remain pending. In the present Office Action, claim 45 was rejected under 35 U.S.C. § 101. Claim 27 was allegedly rejected under 35 U.S.C. § 102(b) as being anticipated by Maeda et al., U.S. Patent No. 4,496,350 ("Maeda"). Claims 27-29, 33, and 45 were rejected under 35 U.S.C. § 102(b) as being anticipated by Spandorfer, U.S. Patent No. 4,156,288 ("Spandorfer"). Claims 30-32, 37-44, and 46 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Spandorfer in view of Lambarelli et al., U.S. Patent No. 4,663,758 ("Lambarelli"). Applicant respectfully traverses these rejections and requests reconsideration. Claims 34-36 were objected to as being dependent from a rejected base claim but would be allowable if rewritten in independent form.

### Allowable Claims 34-36 and 47-51

Applicant has rewritten claim 34 in independent form. Accordingly, claim 34 is in condition for allowance. Claims 35-36 and 47-51 depend from claim 34, and thus are also in condition for allowance.

### Maeda Reference

Since claim 27 has been cancelled, Applicant submits that the rejection based on Maeda is moot. However, Applicant notes that the Maeda reference is not of record in the present application (i.e. it is not listed on a PTO-892 form or a PTO-1449 form). The undersigned looked up patent number 4,496,350, but it is a patent to Cosentino and is entitled "Blood Access Device". This patent appears to have nothing to do with the present application. The undersigned also input Maeda as an inventor name at the USPTO website and received 4,408 matches. Accordingly, Applicant is unsure of what reference is intended with respect to the rejection based on Maeda. Applicant respectfully requests that the Maeda reference be made of record in the next action.

### Claims 33 and 37-46

Applicant respectfully submits that each of claims 33 and 37-46 recites a combination of features not taught or suggested in the cited art. For example, claim 33

recites a combination of features including: "a shift register having a plurality of slots connected in series, each one of the plurality of slots coupled to one of the plurality of modules, and an output of a last slot of the plurality of slots is coupled to an input of an initial slot of the plurality of slots to form a ring, each of the plurality of slots corresponding to a time slot on the ring, and each of the time slots assigned to one of the plurality of modules".

Spandorfer does not teach or suggest the above highlighted features. Instead, Spandorfer teaches "FIG. 1 shows a plurality of stages 1 through n connected in series to form an asynchronous shift register 10. As taught in the patent to Cogar, the shift register is provided with a transfer control stage 12 for controlling the transfer of data bits out of stage n of the register to a central processor or utilization device over a lead 13. The lead 41<sub>p</sub> comes from the utilization device as explained in the Cogar patent and is utilized to initiate a readout from stage n of the register to the utilization device through the transfer control stage. The Cogar patent teaches that a data source should be connected to stage 1 of the shift register so that each bit of data must pass through each stage of the register to reach the output 13. This results in an undue delay where the data is being entered into an empty shift register or into a shift register wherein only a few of the stages near the output stage n are full. In accordance with the principles of the present invention, all data is not entered into the register through stage 1 but is instead entered into the empty stage of the shift register nearest the transfer control stage." (Spandorfer, col. 2, lines 38-59). Accordingly, Spandorfer teaches a shift register in which the output is connected to a utilization device and which receives input from a single data source (reference numeral 14, Fig. 1) into the empty stage that is nearest the transfer control stage.

Furthermore, Spandorfer does not teach or suggest a combination of features including "at least two of the plurality of modules are configured to independently generate frames for transmission on the ring formed by the shift register, each frame comprising a communication between two or more of the plurality of modules". Still further, the alleged combination of Spandorfer and Lambarelli does not teach or suggest the combination of features recited in claim 33.

For at least the above stated reasons, Applicant submits that claim 33 is patentable over the cited art.. Claims 37-44 depend from claim 33 and thus are patentable over the cited art for at least the above stated reasons as well. Each of claims 37-44 recite additional combinations of features not taught or suggested in the cited art.

Claim 45 recites a combination of features including: "shifting a plurality of frames in a plurality of slots of a shift register, the plurality of frames comprising communication among a plurality of modules, each of the plurality of slots coupled to one of the plurality of modules, and an output of a last slot of the plurality of slots is coupled to an input of an initial slot of the plurality of slots to form a ring, each of the plurality of slots corresponding to a time slot on the ring, and each of the time slots assigned to one of the plurality of modules, and wherein at least two of the plurality of modules are configured to independently generate frames for transmission on the ring formed by the shift register". The teachings of Spandorfer, highlighted above, do not teach or suggest the above highlighted features of claim 45, either. Furthermore, the alleged combination of Spandorfer and Lambarelli does not teach or suggest the above highlighted features.

For at least the above stated reasons, Applicant submits that claim 45 is patentable over the cited art. Claim 46 depends from claim 45 and thus is patentable over the cited art for at least the above stated reasons as well. Claim 46 recites an additional combination of features not taught or suggested in the cited art.

### Section 101 Rejection

Applicant respectfully submits that claim 45 meets the requirements of 35 U.S.C. § 101. The Office Action refers to the guidelines for computer-related inventions in the rejection, and particularly to the definition of descriptive material per se as being non-statutory. Descriptive material refers to data structures or computer program listings. However, claim 45 claims neither data structures nor computer listings. Rather, claim 45 is a method claim that recites various operations performed by or on various hardware

components (e.g. a shift register and a plurality of modules). Such method claims have long been recognized as statutory subject matter. Applicant respectfully submits that the 35 U.S.C. § 101 rejection is in error and respectfully requests that it be rescinded.

### CONCLUSION

Applicant submits that the application is in condition for allowance, and an early notice to that effect is requested.

If any extensions of time (under 37 C.F.R. § 1.136) are necessary to prevent the above referenced application(s) from becoming abandoned, Applicant(s) hereby petition for such extensions. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/5181-05005/LJM.

Also enclosed herewith are the following items:

- Return Receipt Postcard
- Petition for Extension of Time
- Fee Authorization Form authorizing a deposit account debit in the amount of \$ for fees (      ).
- Other:

Respectfully submitted,



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AGENT FOR APPLICANT(S)

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